WHAT IS CLAIMED IS:

1. A routing tool for cutting material, the tool comprising:

a substantially cylindrical shaft member having a shank portion and a cutting portion, the cutting portion including a plurality of cutting teeth disposed peripherally about a first helix and an intersecting second helix, wherein a cutting tooth defines a first cutting clearance on a first cutting edge and a first non-cutting clearance on a first non-cutting edge, wherein the cutting tooth includes a flat extending on the cutting tooth resulting in a circular land on an outside diameter of the cutting portion, and wherein the cutting tooth further defines a second cutting clearance on a second cutting edge and a second non-cutting clearance on a second non-cutting edge.

2. A routing tool according to Claim 1, wherein the first cutting and non-cutting edges are defined about the first helix, and the second cutting and non-cutting edges are defined about the second helix.

3. A routing tool according to Claim 1, wherein the adjacent cutting teeth are configured to provide a smooth transition between the first cutting edge of one cutting tooth and the first non-cutting edge of an adjacent cutting tooth.

4. A routing tool according to Claim 1, wherein the adjacent cutting teeth are configured to provide a smooth transition between the second cutting edge on one cutting tooth and the second non-cutting edge of an adjacent cutting tooth.

5. A routing tool according to Claim 1, wherein the first cutting and non-cutting edges extend radially outward to define a length of the flat, and the second cutting and non-cutting edges extend radially outward to define opposing edges of the flat.

6. A routing tool according to Claim 5, wherein the flat on the cutting tooth is approximately 0.017 to 0.020 inches in length.

7. A routing tool according to Claim 1, wherein the first helix has an angle of about 30 degrees, and the second helix has an angle of about –30 degrees, wherein the helix angles are relative to a reference plane extending perpendicular to a longitudinal axis of the shaft member.

8. A routing tool according to Claim 1, wherein the first cutting clearance is approximately 10 degrees and the second cutting clearance is approximately 10 to 12 degrees, wherein the first and second cutting clearances are drawn between the respective cutting edge and a plane drawn perpendicular to a longitudinal axis of the shaft member.

9. A routing tool according to Claim 1, wherein the first non-cutting clearance is approximately 10 degrees and the second non-cutting clearance is approximately 10 to 12 degrees, wherein the first and second non-cutting clearances are angles between a tangent to a relieved surface at the cutting edge and a plane drawn parallel to a longitudinal axis of the shaft member.

10. A routing tool according to Claim 1, wherein the routing tool comprises a grade H-10-F solid carbide.

11. A routing tool according to Claim 1, wherein the cutting portion has more teeth along the right-hand helix than the left-hand helix.

12. A routing tool according to Claim 1, wherein the cutting tooth has about a 0.001 inch land along the flat.

13. An apparatus for cutting material, the tool comprising:

a router having a substantially cylindrical shaft member having a shank portion and a cutting portion, the cutting portion including a plurality of cutting teeth disposed peripherally about a first helix and an intersecting second helix, wherein a cutting tooth defines a first cutting clearance on a first cutting edge and a first non-cutting clearance on a first non-cutting edge, wherein the cutting tooth includes a flat extending on the cutting tooth resulting in a circular land on an outside diameter of

the cutting portion, and wherein the cutting tooth further defines a second cutting clearance on a second cutting edge and a second non-cutting clearance on a second non-cutting edge; and

a motor, wherein the motor is coupled to the shank portion to drive the cutting portion in rotation about an axis extending through the cylindrical shaft member.

14. A routing tool according to Claim 13, wherein the first cutting and non-cutting edges are defined about the first helix, and the second cutting and non-cutting edges are defined about the second helix.

15. An apparatus according to Claim 13, wherein the adjacent cutting teeth are configured to provide a smooth transition between the first cutting edge of one cutting tooth and the first non-cutting edge of an adjacent cutting tooth.

16. An apparatus according to Claim 13, wherein the adjacent cutting teeth are configured to provide a smooth transition between the second cutting edge on one cutting tooth and the second non-cutting edge of an adjacent cutting tooth.

17. An apparatus according to Claim 13, wherein the first cutting and non-cutting edges extend radially outward to define a length of the flat, and the second cutting and non-cutting edges extend radially outward to define opposing edges of the flat.

18. An apparatus according to Claim 17, wherein the flat on the cutting tooth is approximately 0.017 to 0.020 inches in length.

19. An apparatus according to Claim 13, wherein the first helix has an angle of about 30 degrees, and the second helix has an angle of about –30 degrees, wherein the helix angles are relative to a reference plane extending perpendicular to a longitudinal axis of the router.

20. A routing tool according to Claim 13, wherein the first cutting clearance is approximately 10 degrees and the second cutting clearance is approximately 10 to 12 degrees, wherein the first and second cutting clearances are drawn between the respective cutting edge and a plane drawn perpendicular to a longitudinal axis of the router.

21. A routing tool according to Claim 13, wherein the first non-cutting clearance is approximately 10 degrees and the second non-cutting clearance is approximately 10 to 12 degrees, wherein the first and second non-cutting clearances are angles between a tangent to a relieved surface at the cutting edge and a plane drawn parallel to a longitudinal axis of the router.

22. An apparatus according to Claim 13, wherein the routing tool comprises a grade H-10-F solid carbide.

23. An apparatus according to Claim 13, wherein the cutting portion has more cutting teeth along the right-hand helix than the left-hand helix.

24. An apparatus according to Claim 13, wherein the cutting tooth has about a 0.001 inch land along the flat.

25. A method for forming a router tool, the method comprising:

providing a substantially cylindrical shaft member having a shank portion and a cutting portion;

grinding a plurality of first helixes into the cutting portion peripherally about the cutting portion, wherein the grinding step forms a first cutting clearance on a first cutting edge and a first non-cutting clearance on a first non-cutting edge on a cutting tooth; and

grinding a plurality of second helixes into the cutting portion peripherally about the cutting portion to define a flat on the cutting tooth, resulting in a circular land on an outside diameter of the cutting portion, wherein the second helixes intersect the first helixes such that the second grinding step forms a second

cutting clearance on a second cutting edge and a second non-cutting clearance on a second non-cutting edge on the cutting tooth to define a plurality of cutting teeth.

26. The method according to Claim 25, wherein the grinding steps include grinding more teeth along the right-hand helix than the left-hand helix.